

Amendment and Response

Applicant: Francisco Corella

Serial No.: 09/483,185

Filed: January 14, 2000

Docket No.: 10991054-1

Title: AUTHORIZATION INFRASTRUCTURE BASED ON PUBLIC KEY CRYPTOGRAPHY

REMARKS

This Amendment is responsive to the Non-Final Office Action mailed September 15, 2003. The specification has been objected to. With this response, the specification has been amended to correct the bases for objection. Claims 1-24 were rejected. With this Response, claims 4, 7, and 19 have been amended to correct informalities and for clarity. Claims 1-24 remain pending in the application and are presented for reconsideration and allowance.

Objections to the Specification

The Examiner has objected to the embedded hyperlink on page 4, line 15. With this Amendment, the hyperlink has been removed and replaced with plain text.

The Examiner has also objected to the use of the trademark Windows 2000 in the specification. With this Amendment, all instances of Windows and Windows 2000 have been indicated with the ® symbol and followed by the generic name, "operating system."

No new matter has been added to the specification with this Amendment.

Therefore, Applicant respectfully requests that the objections to the specification be removed.

Claim Rejections under 35 U.S.C. § 103

The Examiner has rejected independent claims 1-6 and 13-18 on the basis of 35 U.S.C. § 103(a) as being obvious over Chapman et al. (U.S. Patent No. 6,058,484) in view of Lipner et al. (U.S. Patent No. 5,210,795).

The Examiner rejected claims 4 and 16 under 35 U.S.C. § 103 as being unpatentable over the Chapman Patent in view of the Lipner Patent in further view of the Asay U.S. Patent No. 5,903,882.

The Examiner rejected claim 7, 9, 19, and 21 under 35 U.S.C. § 103 as being unpatentable over the Chapman Patent in view of the Liper Patent in further view of the Howell U.S. Patent No. 5,276,901.

The Examiner rejected claims 11 and 23 under 35 U.S.C. § 103 as being unpatentable over the Chapman Patent in view of the Lipner Patent and in further view of the Maruyama U.S. Patent No. 6,393,563.

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The Examiner rejected claims 12 and 24 under 35 U.S.C. § 103 as being unpatentable over the Chapman Patent in view of the Lipner Patent in further view of the Kausik U.S. Patent No. 6,263,446.

The Chapman Patent is directed to systems and methods for addressing problems associated with date settings discrepancies between client computer terminals and server computer terminals. The Chapman et al. patent teaches a scheme for selecting a certificate from a plurality of certificates, each of the plurality of certificates having a specific validity period. The selected certificate is selected because it has a desired validity period based on certain factors.

In the Office Action rejection of independent claims 1 and 13, the Examiner admits that the Chapman et al. patent does not disclose a short term public key certificate. Applicant respectfully submits that the Chapman et al. patent also does not teach or suggest any short term public key certificate, any directory for storing short term authorization information related to the user which is bound to the user's public key and long term identification information by the short term certificate, or any credentials server for issuing the short term certificate. All of these limitations are claimed in independent claim 1. Likewise, the Chapman et al. patent does not teach or suggest storing short term authorization information related to the user or issuing a short term certificate, as claimed in independent claim 13.

The Examiner further relies on the Lipner et al. patent as a basis for the § 103 obviousness rejection. The Lipner et al. patent is directed to a method and security devices for authenticating a user of a computer. To address the problem of Trojan Horses or other malicious programs running on the user's computer from compromising the user's password protection, the Lipner et al. patent discloses booting the user's computer with special authentication software that authenticates the user as well as the operating system of the computer that is to be booted later. If the user is unable to enter the correct password, or if the operating system is determined to be different than expected, the authentication software prevents the user from proceeding. Assuming the user is authorized to proceed with the login, the login software generates a temporary public-private key pair called a "session key" and creates a "signed delegation certificate" containing the public component of the session key, identification information about the user, and validity period information. Next, the operating system is permitted to boot and run, and when running, the operating system uses

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the previously created session keys and delegation certificate when communicating with remote servers.

The Lipner et al. patent does not teach or suggest the use of certificate authorities in public key infrastructures for issuing certificates authenticating the user as claimed in independent claims 1 and 13. Although the Lipner et al. patent discloses the use of a “temporary delegation certificate,” the delegation certificate is created and signed by the login software running on the user’s computer and represents the authorization of the user’s computer to speak on behalf of the user. The Lipner et al. patent does not teach or suggest any certificate authority issuing a long term certificate, or any credentials server for issuing a short term certificate. Thus, the delegation certificate does not relate back to any trusted well-known authority vouching for the user. By contrast, the short term certificate claimed in independent claims 1 and 13 binds the public key of the user to the long-term information related to the user from the long term certificate. The long term certificate has been issued by a certificate authority, which is known and trusted.

Furthermore, the short term certificate claimed in independent claims 1 and 13 binds the short term authorization information related to the user. The Lipner et al. patent and the Chapman et al. patent do not teach or suggest a short term certificate for carrying short term authorization information related to the user. Moreover, as per independent claim 1, the short term authorization information related to the user that is included in the short term certificate is from a directory for storing such information. Applicant respectfully submits that the Lipner et al. patent does not teach or suggest such a directory for storing such short term authorization information related to the user that is later included in the short term certificate. Although the Lipner et al. patent describes a disk containing the login software, a hard disk in the user’s computer storing the operating system, and memory of the user’s computer, no directory for storing short term authorization information is taught or suggested.

In view of the above, Applicant submits that all limitations of independent claim 1 and that all features of independent claim 13 are not taught or suggested by the Chapman et al. and Lipner et al. patents. In addition, the Chapman et al. and Lipner et al. patents do not include any suggestion or motivation for combining features thereof to form the invention claimed in independent claims 1 and 13. The Chapman et al. Patent concerns date settings discrepancies between client computer terminals and server computer terminals, and teaches

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selecting from a plurality of long-term certificates based on their validity dates. The Lipner et al. patent concerns protecting a user's authentication information by ensuring that the user's computer terminal is free of malicious programs before permitting the user to log in and access remote servers. Applicants respectfully submit that a person skilled in the art would not find any teaching, suggestion, or motivation to combine or modify the features of the Chapman et al. and Lipner et al. patents to achieve a public key authorization infrastructure or method including the use of a long term certificate issued by a certificate authority, and a short term certificate issued by a credentials server to achieve an authorization of the user by an application program as claimed in independent claims 1 and 13.

Furthermore, as dependent claims 2-12 further define patentably distinct independent claim 1, and dependent claims 14-24 further define patentably distinct independent claim 13, these dependent claims are also believed to be allowable.

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection to claims 1-24, and allowance of all pending claims 1-24.

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CONCLUSION

In view of the above, Applicants respectfully submit that pending claims 1-24 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and formal allowance of claims 1-24 is respectfully requested.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone number to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to either Patrick G. Billig at the blow-listed telephone numbers or William J. Streeter at Telephone No. (970) 898-3886, Facsimile No. (970) 898-7247. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Non Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 15th day of December, 2003.

By 
Name: Patrick G. Billig